AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (Previously Presented): A method comprising:

receiving stay-alive signals from a programming device at a watchdog unit coupled to the programming device during a programming session between the programming device and an implantable medical device;

resetting a watchdog timer maintained by the watchdog unit in response to receipt of each of the stay-alive signals; and

sending a signal from the watchdog unit to the implantable medical device via wireless telemetry to change a mode of operation of the implantable medical device in response to expiration of the watchdog timer.

Claim 2 (Previously Presented): The method of claim 1, wherein the watchdog unit is coupled to the programming device by a cable, and receiving stay-alive signals comprises detecting transitions on a data line of the cable.

Claim 3 (Cancelled).

Claim 4 (Original): The method of claim 1, wherein receiving stay-alive signals comprises receiving programming signals and stay-alive signals, and resetting a watchdog timer comprises resetting the watchdog timer in response to each of the programming signals and stay-alive signals.

Claim 5 (Withdrawn- Previously Presented): The method of claim 1, wherein sending a signal to the implantable medical device comprises directing the implantable medical device to suspend delivery of therapy.

Claim 6 (Withdrawn- Previously Presented): The method of claim 1, wherein sending a signal to the implantable medical device comprises directing the implantable medical device to perform a power-on reset.

Claim 7 (Withdrawn- Previously Presented): The method of claim 1, wherein sending a signal to the implantable medical device comprises providing a program to the implantable medical device, the program controlling delivery of therapy by the implantable medical device.

Claim 8 (Currently Amended): The method of claim 1, wherein sending a signal to the implantable medical device includes causing the implantable medical device to revert to a ~~previously stored~~ program previously stored within a memory of the implantable medical device.

Claim 9 (Cancelled).

Claim 10 (Previously Presented): The method of claim 1, further comprising:

receiving a signal from the programming device at the watchdog unit that indicates initiation of a programming operation; and

initializing the watchdog timer in response to the signal.

Claim 11 (Previously Presented): The method of claim 1, further comprising:

receiving power at the watchdog unit from the programming device;

detecting a failure of power delivery by the programming device;

activating an auxiliary power source of the watchdog unit in response to the detection; and

sending a signal from the watchdog unit to the implantable medical device via wireless telemetry to change the mode of operation of the implantable medical device in response to the detection.

Claim 12 (Currently Amended): The method of claim 1, further comprising:

receiving an emergency-off signal from a user at the watchdog unit; and

sending a signal from the watchdog unit to the implantable medical device via wireless telemetry to change the mode of operation of the implantable medical device in response to receipt of the signal.

Claim 13 (Previously Presented): A watchdog unit comprising:

a telemetry circuit; and

a processor to receive stay-alive signals from a programming device coupled to the watchdog unit during a programming session between the programming device and an implantable medical device, reset a watchdog timer in response to receipt of each of the stay-alive signals, and send a signal to the implantable medical device via the telemetry circuit to change a mode of operation of the implantable medical device in response to expiration of the watchdog timer.

Claim 14 (Previously Presented): The watchdog unit of claim 13, wherein the processor is coupled to a data line of a cable, and the processor receives stay-alive signals by detecting transitions on the data line.

Claim 15 (Withdrawn- Previously Presented): The watchdog unit of claim 13, wherein the signal causes the implantable medical device to suspend delivery of therapy.

Claim 16 (Withdrawn- Previously Presented): The watchdog unit of claim 13, wherein the signal causes the implantable medical device to perform a power-on reset.

Claim 17 (Withdrawn- Previously Presented): The watchdog unit of claim 13, further comprising a memory to store a program that controls delivery of therapy by the implantable medical device, wherein the processor changes the mode of operation of the implantable medical device by providing the program to the implantable medical device via the telemetry circuit.

Claim 18 (Currently Amended): The watchdog unit of claim 13, wherein the signal causes the implantable medical device to revert to a ~~previously stored~~ program previously stored within a memory of the implantable medical device.

Claim 19 (Previously Presented): The watchdog unit of claim 13, wherein the processor receives a signal from the programming device that indicates initiation of a programming operation, and initializes the watchdog timer in response to the signal.

Claim 20 (Previously Presented): The watchdog unit of claim 13,

wherein the watchdog unit receives power from the programming device, the watchdog unit further comprising an auxiliary power source, and

wherein the processor detects a failure of power delivery by the programming device, activates the auxiliary power source in response to the detection, and sends a signal to the implantable medical device via the telemetry circuit to change the mode of operation of the implantable medical device in response to the detection.

Claim 21 (Previously Presented): The watchdog unit of claim 13, further comprising a user interface, wherein the processor receives an emergency-off signal in response to interaction of a user with the user interface, and sends a signal to the implantable medical device via the telemetry circuit to change the mode of operation of the implantable medical device in response to receipt of the signal.

Claim 22 (Previously Presented): The watchdog unit of claim 13, wherein the programming device is coupled to a programming head by a cable, and the watchdog unit is located within the programming head.

Claim 23 (Previously Presented): The watchdog unit of claim 13, wherein the programming device is coupled to a programming head by a cable, and watchdog unit couples the cable to the programming head.

Claim 24-32 (Cancelled).

Claim 33 (Previously Presented): A computer-readable medium comprising instructions that cause a programmable processor to:

receive stay-alive signals at a watchdog unit coupled to a programming device from the programming device during a programming session between the programming device and an implantable medical device;

reset a watchdog timer maintained by the watchdog unit in response to receipt of each of the stay-alive signals; and

send a signal from the watchdog unit to the implantable medical device via wireless telemetry to change a mode of operation of the implantable medical device in response to expiration of the watchdog timer.

Claim 34 (Original): The computer-readable medium of claim 33, wherein the instructions that cause a programmable processor to receive stay-alive signals comprise instructions that cause a programmable processor to:

receive programming signals and stay-alive signals from the programming device; and

reset the watchdog timer in response to each of the programming signals and stay-alive signals.

Claim 35 (Withdrawn- Previously Presented): The computer-readable medium of claim 33, wherein the instructions that cause a programmable processor to send a signal to the implantable medical device comprise instructions that cause a programmable processor to direct the implantable medical device to suspend delivery of therapy.

Claim 36 (Withdrawn- Previously Presented): The computer-readable medium of claim 33, wherein the instructions that cause a programmable processor to send a signal to the implantable medical device comprise instructions that cause a programmable processor to direct the implantable medical device to perform a power-on reset.

Claim 37 (Withdrawn- Previously Presented): The computer-readable medium of claim 33, wherein the instructions that cause a programmable processor to send a signal to the implantable medical device comprise instructions that cause a programmable processor to provide a program to the implantable medical device, the program controlling delivery of therapy by the implantable medical device.

Claim 38 (Currently Amended): The computer-readable medium of claim 33, wherein the instructions that cause a programmable processor to send a signal to the implantable medical device comprise instructions that cause a programmable processor to direct the implantable medical device to revert to a ~~previously-stored~~ program previously stored within a memory of the implantable medical device.

Claim 39 (Previously Presented): The computer-readable medium of claim 33, further comprising instructions that cause a programmable processor to:

receive a signal at the watchdog unit from the programming device that indicates initiation of a programming operation; and

initialize the watchdog timer in response to the signal.

Claim 40 (Previously Presented): The computer-readable medium of claim 33, further comprising instructions that cause a programmable processor to:

detect a failure of power delivery by the programming device;

activate an auxiliary power source of the watchdog unit in response to the detection; and

send a signal from the watchdog unit to the implantable medical device via wireless telemetry to change the mode of operation of the implantable medical device in response to the detection.

Claim 41 (Previously Presented): The computer-readable medium of claim 33, further comprising instructions that cause a programmable processor to:

receive an emergency-off signal from a user at the watchdog unit; and

send a signal from the watchdog unit to the implantable medical device via wireless telemetry to change the mode of operation of the implantable medical device in response to the signal.

Claims 42-53 (Cancelled).

Claim 54 (Previously Presented) A system comprising:

a programming device;

an implantable medical device; and

a watchdog unit coupled to the programming device to receive stay-alive signals from the programming device during a programming session between the programming device and the implantable medical device, reset a watchdog timer maintained by the watchdog unit in response to receipt of each of the stay-alive signals, and send a signal from the watchdog unit to the implantable medical device via wireless telemetry to change a mode of operation of the implantable medical device in response to expiration of the watchdog timer.

Claim 55 (Previously Presented): The system of claim 54, wherein the watchdog unit receives stay-alive signals and programming signals, and resets the watchdog timer in response to each of the stay-alive signals and the programming signals.

Claim 56 (Currently Amended): The system of claim 54, ~~further comprising~~ wherein the implantable medical device comprises a memory to store a program that controls delivery of therapy by the implantable medical device, wherein the watchdog unit ~~cause~~ causes the implantable medical device to delivery therapy according to the program in response to expiration of the watchdog timer.

Claim 57 (Previously Presented): The system of claim 54, wherein the watchdog unit receives a signal from the programming device that indicates initiation of a programming operation, and initializes the watchdog timer in response to the signal.

Claim 58 (Previously Presented): The system of claim 54, wherein the implantable medical device comprises an implantable neurostimulator.